

STRUCTURES G-393 A, B and C

The G-393 A, B and C structures are corrugated aluminum culverts with concrete weir boxes located on the upstream end of the culverts and large aluminum slide gates located at the downstream end of the weir boxes (upstream end of the culverts). The G-393B structure is also equipped with a smaller aluminum slide gate in the side of the weir box that may be used to further lower water levels within treatment cell 3. These structures are located on the STA-6, Section 1 east perimeter levee.

PURPOSE

Together or independently, these structures control outflows from treatment cell 3 to the STA-6, Section 1 discharge canal. However, until STA-6, Section 2 is constructed and in operation the G-393B structure is the only one of the three structure that will be needed for normal STA-6, Section 1 operations.

OPERATION

G-393A, B and C are equipped with passive weir structures. The large slide gates are typically opened during the wet season and closed, for water conservation purposes, during the dry season and to close the cell in the event that it must be taken off-line for maintenance or repair. The smaller side gate at G-393B can be used to further lower water levels within cell 3 to elevation 12.0' NGVD if necessary.

FLOOD DISCHARGE CHARACTERISTICS

	<u>Design</u>
Discharge Rate	<u>140 cfs (each structure)</u>
Static Headwater Elevation	<u>14.10' NGVD</u>
Max. Headwater Elevation	<u>16.20' NGVD</u>
Static Tailwater Elevation	<u>Varies</u>
Max. Tailwater Elevation	<u>15.15' NGVD</u>
Type Discharge	<u> </u>

DESCRIPTION OF STRUCTURES

Culverts

Type: Corrugated aluminum culvert with associated upstream fixed-crested weir box and gates at each structure

Number of barrels: 1

Size of barrels: 84" diameter

Length of barrels: Approximately 75 feet

Flow line elevation: 5.0 feet NGVD (Invert Elevation)

Weirs

Type Weir Box (at each structure)

Size 3 feet X 2 feet

Length: 23 feet

Control: Fixed Crest elevations at 14.0' NGVD

Gates (Large Gates)

Number: 1 at each structure

Type: Hand Cranked-operated Single Stem Lift Gate

Size: 84" X 84"

Control: Manual only

Lifting Mechanism Type: Pedestal mounted, screw type hoist, with handwheel (for manual) operation

Gates (Small Weir Side Gates)

Number: At G-393B only

Type: Hand Cranked-operated Single Stem Lift Gate

Size: 36" X 24"

Control: Manual only

Lifting Mechanism Type: Pedestal mounted, screw type hoist, with handwheel (for manual) operation

Date Acceptance into Service: December 1997

ACCESS: Access to these structures is from the STA-6 East perimeter levee

HYDRAULIC AND HYDROLOGIC MEASUREMENTS

Water Level: Remote digital upstream and downstream recorder at G-393B

Gate Position Recorder: None

DEWATERING FACILITIES (per gate): None

MONITORING: Flow and Water Quality compliance monitoring at G-393B as required by FDEP Permit Number 262918309 (EFA).